AF/2644 $
SFW

PTO/SB/21 (modified)

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/980,430
Filing Date	March 29, 2002
First Named Inventor	Aart Zeger van Halteren et al.
Art Unit	2644
Examiner Name	Huyen D. Le
Attorney Docket Number	47161-00031USPX

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
- ☒ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ Affter Allowance communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to Group **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please identify below):
  Acknowledgement Postcard
  Check in the amount of $340.00

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual Name	Jenkens & Gilchrist, P.C. Justin D. Swindells
Signature	
Date	December 1, 2004

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Posta Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450 on the date show below.

Typed or printed name	Adrienne White		
Signature		Date	December 1, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9100 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.	:	09/980,430 Confirmation No. 3407
Applicants	:	Aart Zeger van Halteren et al.
Filed	:	March 29, 2002
Title	:	COIL CONSTRUCTION FOR AN ELECTROACOUSTIC TRANSDUCER
TC/A.U.	:	2644
Examiner	:	Huyen D. Le
Docket No.	:	47161-00031USPX
Customer No.	:	30,223

Commissioner for Patents
Mail Stop Appeal Brief - Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, Mail Stop Appeal Brief - Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 1, 2004.

Signature: _____
Adrienne White

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 1.191 AND 1.192

Dear Sir:

This Appeal Brief is filed pursuant to the Applicants' appeal to the Board of Patent Appeals and Interferences ("Board") from the final rejection of claims 8-11 and 27-36 in an Office Action dated September 2, 2004. A Notice of Appeal was mailed on September 27, 2004, and was received by the USPTO on October 1, 2004. The due date for this Appeal Brief is two months from the receipt date by the USPTO of the Notice of Appeal, *i.e.*, December 1, 2004, and this paper is being submitted by this due date.

In accordance with 37 C.F.R. § 1.192(a), this brief is being submitted in triplicate.

I. REAL PARTY IN INTEREST

The real party in interest is SonionMicrotronic Nederland B.V., having a place of business at Zekeringstraat 9, Amsterdam, Netherlands, 1014 BM.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board of Patent Appeals and Interferences in the present appeal.

III. STATUS OF CLAIMS

Claims 8-11 and 27-36 are currently pending in the above-referenced application. No claims have been allowed. Claims 1-7 and 12-26 have been canceled.

The Applicants appeal from the final rejection of claims 8-11 and 27-36. Claim 28 was rejected under 35 U.S.C. § 112, ¶ 2, as being allegedly indefinite because it depends from withdrawn claim 12. Claims 8-11, 27, and 29-36 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,432,758 (Sone). Claims 8-9 and 31-32 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,861,686 (Lee). Claim 8 was rejected under 35 U.S.C. § 102(a) as being allegedly anticipated by U.S. Patent No. 6.023,518 (Kuwabara). Claims 9-10, 29, and 31-33 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kuwabara.

The appealed claims are attached as Appendix A. Sone, Lee, and Kuwabara are attached as Appendices B, C, and D, respectively. A copy of the Office Action mailed May 19, 2004 that finally rejected the claims is attached as Appendix E.

IV. STATUS OF AMENDMENTS

The Applicants filed a timely Amendment and Reply After Final on July 19, 2004, in response to the Final Office Action mailed May 19, 2004. A copy of the Amendment and Reply

After Final is attached as Appendix F. In the Amendment and Reply after Final, the Applicants amended claim 28 to overcome the § 112, ¶ 2 rejection, and cancelled claims 12-26. In an Advisory Action mailed September 2, 2004, the Examiner maintained the rejection of all pending claims. A copy of the Advisory Action is attached as Appendix G.

V. SUMMARY OF INVENTION

The present invention is directed to a coil assembly for an electroacoustic transducer having a coil and an electric circuit board positioned in a perpendicular relationship against the coil. An embodiment of the present invention is reproduced below from FIG. 2:

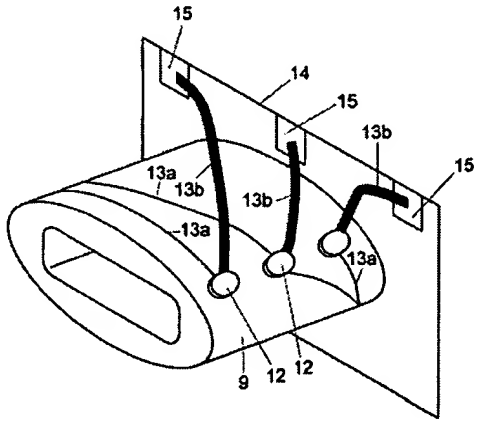


Fig. 2

The electric circuit board (14) is positioned in a perpendicular relationship against the coil (9) and can be adhered thereto. Applicants' Specification, at p. 4, ll. 14-23 (*see* WO 00/74436). Signal processing electronics can be mounted on the electric circuit board, which can be rigid or flexible. *Id.* at p. 4, ll. 17-20; p. 4, l. 28 to p. 5, l. 3. Lead wires (13) can electrically connect the electric circuit board to the coil. *Id.* at p. 4, ll. 15-17.

VI. ISSUES

The issues in this Appeal are whether:

rejection of Claim 28 as amended under 35 U.S.C. § 112, ¶ 2 as being allegedly indefinite should be reversed;

rejection of Claims 8-11, 27, and 29-36 under 35 U.S.C. § 102(b) as being allegedly anticipated by Sone should be reversed;

rejection of Claims 8-9 and 31-32 under 35 U.S.C. § 102(b) as being allegedly anticipated by Lee should be reversed;

rejection of Claim 8 under 35 U.S.C. § 102(a) as being allegedly anticipated by Kuwabara should be reversed; and

rejection of Claims 9-10, 29, and 31-33 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kuwabara should be reversed.

VII. GROUPING OF CLAIMS

Claims 8-11 and 27-30 stand or fall together because they involve an electric circuit board perpendicularly positioned against a coil.

Claims 31-36 stand or fall together because they further involve signal processing electronics on the electric circuit board.

VIII. ARGUMENT

A. Claim Rejection – 35 U.S.C. § 112

Claim 28 was rejected under 35 U.S.C. § 112 as being dependent on withdrawn Claim 12. Claim 28 was amended to depend from Claim 27, overcoming this rejection. The rejection of claim 28 should be reversed.

B. Claim Rejections – 35 U.S.C. § 102

1. The Law on Anticipation

Anticipation requires that each and every element, as set forth in the claim, is either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987); M.P.E.P. § 2131.

2. Sone Does Not Disclose The Claimed Electric Circuit Board

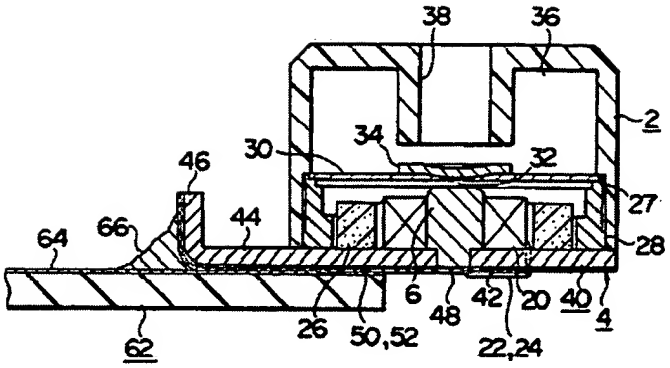
Claims 8-11, 27, and 29-36 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,432,758 (Sone) (attached as App. B). Claims 8 and 31 call for, *inter alia*, "an electric circuit board wherein at least a surface portion thereof is positioned against said coil in a substantially perpendicular relationship to said axis." Applicants submit that Sone teaches a magnetic circuit, not an electric circuit board as required by the claim. Because Sone fails to disclose this claim element, claim 8 and its dependent claims are believed to be allowable over Sone.

The Office Action (App. E) contended that "Sone teaches a coil assembly for an electroacoustic transducer which comprises a coil (20) and an electric circuit board (40, 42, 44, 48, 50, 52, figures 1, 2, 7, 8, 9)." Office Action at 2, ¶ 4. Applicants respectfully submit that the elements 40, 42, 44, 48, 50, and 52 do not form an electric circuit board, but rather, form a "magnetic circuit" as explicitly disclosed by Sone. Furthermore, Sone does actually disclose a printed board, designated as element 62, but clearly *no portion* of the printed board 62 (*see* FIG. 5 of Sone, App. B) is positioned against a coil in a substantially perpendicular relationship to its axis as called for by independent claims 8 and 31.

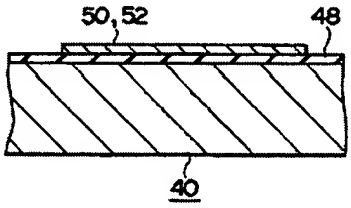
Sone *repeatedly* teaches that the metal base plate 40 forms a closed magnetic circuit not an electric circuit as called for by claims 8 and 31: "The metal base plate 40 is formed of a single

metallic plate made of a **magnetic** material to constitute a part of a **magnetic circuit**." Col. 4, ll. 13-16. "That is, both the core 6 and the metal base plate 40 form a closed **magnetic circuit** to thereby constitute a part of a magnetic path of the magnetic driving portion 5." Col. 5, ll. 25-28. "The electroacoustic transducer has a diaphragm 30 which constitutes a closed **magnetic circuit** together with the magnet 26 and is driven by the vibrating magnetic field . . . ." Col. 5, ll. 40-43. "FIG. 4 shows a concrete embodiment of the metal base plate 40 which serves as a closing means for the opening of the housing 2 and also constitutes a part of the closed **magnetic circuit**." Col. 6, ll. 5-8. "The core 6 is not mechanically connected to the base portion but integrated with the metal base plate 40 to form a closed **magnetic circuit** so as to constitute a part of the magnetic path of the magnetic driving portion 5." Col. 8, ll. 24-28. Nowhere does Sone teach or suggest that the metal base plate 40 is part of an electric circuit board, nor could it be because it is made of metal. Col. 6, ll. 8-10 ("Accordingly, the metal base plate 40 is made of a **metallic plate** so as to give a suitable rigidity thereto."). No electric circuit board could have a metal base plate because metal is conductive and therefore no electric circuits could be mounted to the metal. Applicants are not aware of any electric circuit board where the board to which the electronics are mounted is made of metal.

In fact, Sone does disclose a printed board 62, shown in FIG. 5 (reproduced below) and apparently overlooked by the Office Action, but clearly no portion of the printed board 62 is positioned against the core 20.



Rather, the printed board 62 is positioned against the metal base plate 40 of the magnetic circuit as shown above and as described in Sone: "The closing portion 42 and the terminal portion 44 may be electrically connected and mechanically fixed by solder 66 to a conductive pattern 64 of a printed board 62, as illustrated in FIG. 5." Col. 6, ll. 24-27. *See also* col. 7, ll. 33-36 ("Compared with the embodiment as illustrated in FIG. 5, fixing strength between the metal base plate 40 and the printed board 62 is increased, thereby enhancing the reliability thereof."). In fact, as is illustrated in FIG. 4 (oriented upside-down relative to FIG. 5 and reproduced below), the conductive patterns 50, 52 are disposed on the underside of the metal base plate 40 separated by an insulating film 48:



Thus, Sone teaches that the "conductive patterns 50 and 52 are formed by a conductor forming methods [sic] such as printing or plating conductive paste, and may be used **for** mounting circuits or elements of the electroacoustic transducer for miniaturization and simplification of electronic devices." Col. 4, ll. 36-41 (bolded text added). Although the Examiner cites this passage as alleged support for a teaching of mounting electronics for signal

processing (claims 29, 31) to the claimed electric circuit board, Applicants respectfully disagree. The conductive patterns 50, 52, located on the underside of the metal base plate 40, are used **for** mounting circuits or transducer elements to the printed board 62 (which does not correspond to the claimed electric circuit board) and not to the metal base plate 40. As explained above, if the circuits or electric transducer elements were mounted on the metal base plate 40, they would not function because the plate is made of metal. In other words, the use of the word "for" indicates that circuits or transducer elements are not mounted "on" the conductive patterns 50, 52, but rather the conductive patterns 50, 52 are used "for" mounting them.

Therefore, for at least the foregoing reasons, claims 8 and 31 are believed to be allowable over Sone, and the rejection thereof should be reversed. Regarding the dependent claims 9-10, 27-30, 32-36, they are believed to be allowable for at least the reason that the respective claims from which they depend are allowable.

2. Sone Does Not Disclose Elements Required By The Rejected Dependent Claims

Regarding claims 9 and 32, they are believed to be allowable over Sone for at least the additional reason that Sone does not teach or suggest a flexible electric circuit board as claimed. The Office Action cites Col. 4, ll. 27-43, and Col. 6, ll. 11-19 & 65-67 as alleged support that the metal base plate 40 can be flexible. In fact, these passages nowhere state that the metal base plate 40 can be flexible. On the contrary, Sone teaches that "the metal base plate 40 is made of a metallic plate so as to give a suitable **rigidity** thereto." Col. 6, ll. 8-10 (bolded text added). That the conductive patterns 50, 52 may be flexible is of no moment because the Office Action identifies the electric circuit board as including the metal base plate 40, which is clearly rigid, not

flexible. Accordingly, claims 9 and 32 are believed to be allowable over Sone for at least this additional reason, and the rejection of these claims should be reversed.

Regarding claims 11 and 34, they are believed to be allowable over Sone for at least the additional reason that the metal base plate 40 is not the electric circuit board as claimed, and therefore lacks the opening as claimed. Moreover, Sone does not teach or suggest that the printed board 62 includes any opening, let alone an opening that is substantially aligned with the coil opening. Accordingly, claims 11 and 34 are believed to be allowable over Sone for at least this additional reason.

Regarding claim 36, even assuming *arguendo* that the printed board 62 is an electric circuit board, Sone does not teach electrically connecting the printed board 62 to the coil via coil lead wires. Sone actually teaches that the metal base plate 40 may be electrically connected and mechanically fixed by "**solder** 66 to a conductive pattern of a printed board 62, as illustrated in FIG. 5." Col. 6, ll. 25-27 (bolded text added).

2. Lee Does Not Even Show A Circuit Board

Claims 8-9 and 31-32 were also rejected as being allegedly anticipated by Lee (App. C). The Office Action identifies the claimed electric circuit board as allegedly corresponding to element 3b of Lee, but overlooks the fact that Lee explicitly states that a printed circuit board (PCB) is not shown in the Figures. The second vibration member 3b is clearly not an electric circuit board as claimed. It is "not made of a thin metal plate but is made of a **synthetic resin film**." Col. 4, ll. 7-9 (bolded text added). Lee describes the purpose of the second vibration member 3b as follows:

> During a process of producing a cellular or pager phone, the integrated device of this invention is set in the phone using the tapes 30. In addition, the outer terminals 33b of the lead panel 23b of the second vibration member 3b are

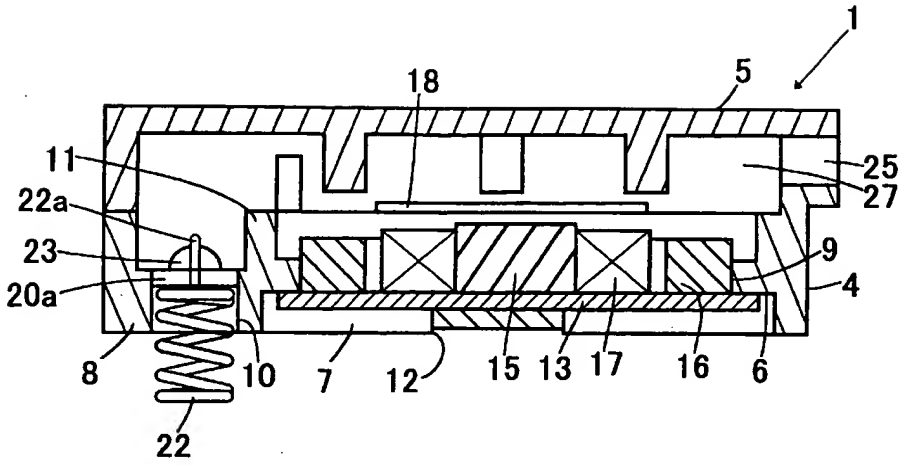
> connected to the **PCB (not shown)** of the phone, [sic] Due to such a second vibration member 3b, the integrated device of this invention effectively connects the coil 8 to the PCB of the phone while being free from any separate circuit board.
>
> In the operation of the above device, a user freely select, one of the two modes: a vibration mode performed by the first vibration member 3a and a sound mode performed by the second vibration member 3b. When a user selects one of the two modes, the PCB of the cellular or pager phone outputs a high or low frequency to the coil 8 of the device in response to a calling signal output from a microprocessor of the phone. In this case, the output frequency is automatically controlled by the PCB in accordance with a selected mode of the device.
>
> Due to such a frequency applied from the PCB to the coil 8 of the device, an electromagnetic field is formed between the magnet 7 and the coil 8, thus moving both the yoke 6 and the coil 8 in the axial direction of the case 1 **while selectively vibrating either of the two vibration members 3a and 3b**.

Col. 5, ll. 13-28 (bolded text added). Thus, the second vibration member 3b vibrates in response to a frequency applied by a printed circuit board *which is not even shown in Lee.* Accordingly, Lee does not even show an electric circuit board, let alone one as claimed in claims 8-9, 31-32. Therefore, they are believed to be allowable over Lee, and the rejection of these claims based on Lee should be reversed.

3. The "Coil Spring" Of Kuwabara Does Not Correspond to The Claimed Coil

Claim 8 was rejected under 35 U.S.C. § 102(a) as being allegedly anticipated by Kuwabara (App. D). The Office Action avoids any mention of the "coil 17" shown and described repeatedly throughout Kuwabara, but instead contends that the **coil spring** 22 (the Office Action refers to the coil spring 22 as a coil) corresponds to the claimed coil. This contention runs directly afoul of the explicit teachings of Kuwabara. For convenience, Figure 2 of Kuwabara is reproduced below, showing the coil spring 22 and the coil 17:

FIG. 2



Kuwabara itself makes a clear distinction throughout the written description between the "coil 17" and the "coil spring 22." Col. 2, ll. 51-52 ("Thus, the coil 17 is connected to the coil springs 22."). Kuwabara also makes the same distinction in the claims (*see, e.g.,* Claim 1, "a coil" and "at least two coil springs"). If the coil spring 22 is a coil as the Office Action contends, then the distinction by Kuwabara between the coil spring 22 and the coil 17 is meaningless. Thus, Applicants respectfully submit that claim 8 is allowable over Kuwabara, and the rejection thereof should be reversed.

C. Claim Rejection – 35 U.S.C. § 103

1. The Law Of Obviousness

Obviousness requires that all the limitations of a claim must be taught or suggested by the prior art. M.P.E.P. § 2143.03 (citing *In re Royka*, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974)). A *prima facie* case of obviousness requires three basic criteria.

> First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art, not in applicant's disclosure.

M.P.E.P. § 2143 (citing *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991)).

Although a prior art reference may be modified to meet the claimed limitation, the resultant modified reference is not obvious unless the prior art also suggests or motivates the desirability of the modification. *In re Mills*, 916 F.2d 680, 682, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990) (citing *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)). Obviousness cannot "be established using hindsight or in view of the teachings or suggestions of the invention." *Ex parte Maguire*, 2002 WL 1801466, at *4 (Bd. Pat. App. & Inter. 2002) (quoting *Para-Ordnance Mfg. Inc. v. SGS Importers Int'l Inc.*, 73 F.3d 1085, 1087, 37 U.S.P.Q.2d 1237, 1239 (Fed. Cir. 1995), *cert. denied*, 519 U.S. 822 (1996)) (Appendix G). Further, the proposed modification cannot render the prior art "unsatisfactory for its intended purpose" nor can it "change the principle of operation" of a reference. M.P.E.P. § 2143.01 (citing *In re Gordon*, 733 F.2d at 902, 221 U.S.P.Q. at 1127 and *In re Ratti*, 270 F.2d 810, 813, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959)).

Additionally, it is rarely appropriate for an Examiner to rely on common knowledge or well-known prior art not supported by documentary evidence, when an application is under final rejection. M.P.E.P. § 2144.03. An Examiner can generally only rely on unsupported common knowledge or well-known prior art when the facts asserted are "capable of instant and unquestionable demonstration as being well-known." *Id.* (citing *In re Ahlert*, 424 F.2d 1088, 1091, 165 U.S.P.Q 418, 420 (C.C.P.A. 1970)). Further, "[i]t is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal

evidence upon which a rejection was based." *Id.* (citing *In re Zurko*, 258 F.3d 1379, 1386, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001) and *In re Ahlert*, 424 F.2d at 1092, 165 U.S.P.Q at 421).

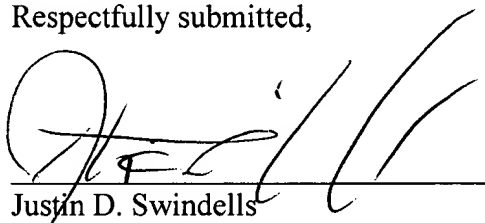
Claims 9-10, 29, and 31-33 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kuwabara (App. D). Regarding claims 9-10 and 29, they are believed to be allowable for at least the reason that claim 8, from which they depend, is allowable for the reasons explained above. Regarding independent claim 31, it is believed to be allowable for at least the same reasons that claim 8 is allowable over Kuwabara. Regarding claims 32-33, they are believed to be allowable for at least the reason that claim 31 is allowable. Accordingly, Applicants request that the rejection of claims 9-10, 29, and 31-33 over Kuwabara be reversed.

IX. CONCLUSION

For at least the foregoing reasons, the final rejection of appealed claims 8-11 and 27-36 set forth in the Final Office Action mailed May 19, 2004, should be reversed.

A check in the amount of $340.00 is enclosed herewith as required by 37 C.F.R. § 1.17(c) for filing this Appeal Brief. The Commissioner is authorized to charge any additional fees inadvertently omitted that may be required (except the issue fee) now or during the pendency of this application to JENKENS & GILCHRIST, P.C. Deposit Account No. 10-0447(47161-00031USPX).

Respectfully submitted,



Date: December 1, 2004

Justin D. Swindells
Reg. No. 48,733
JENKENS & GILCHRIST
225 West Washington Street, Suite 2600
Chicago, Illinois 60606-3418
(312) 425-3900 – telephone
(312) 425-3909 - facsimile

Attorneys for Applicants

Application Serial No. 09/980,430, filed March 29, 2002
APPEALED CLAIMS

8. A coil assembly for an electroacoustic transducer, comprising:

a coil having a coil opening defining an axis therethrough; and

an electric circuit board wherein at least a surface portion thereof is positioned against said coil in a substantially perpendicular relationship to said axis.

9. The coil assembly of claim 8, wherein said electric circuit board is flexible.

10. The coil assembly of claim 8, wherein said electric circuit board is rigid.

11. The coil assembly of claim 8, wherein said electric circuit board includes an opening, said opening of said electric circuit board being substantially aligned with said coil opening.

27. The coil assembly of claim 8, wherein said surface portion of said electric circuit board is positioned against said coil by adhesion.

28. The coil assembly of claim 27, wherein said adhesion is glue.

29. The coil assembly of claim 8, wherein said electric circuit board includes electronics for signal processing.

30. The coil assembly of claim 8, wherein said electric circuit board is electrically connected to said coil via lead wires.

31. A coil assembly for an electroacoustic transducer, comprising:

a coil having a coil opening defining an axis therethrough; and

an electric circuit board wherein at least a surface portion thereof is positioned against said coil in a substantially perpendicular relationship to said axis, said electric circuit board including signal processing electronics.

32. The coil assembly of claim 31, wherein said electric circuit board is flexible.

33. The coil assembly of claim 31, wherein said electric circuit board is rigid.

34. The coil assembly of claim 31, wherein said electric circuit board includes an opening, said opening of said electric circuit board being substantially aligned with said coil opening.

35. The coil assembly of claim 31, wherein said surface portion of said electric circuit board is positioned against said coil by adhesion.

36. The coil assembly of claim 31, wherein said electric circuit board is electrically connected to said coil via coil lead wires.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,430	03/29/2002	Aart Zeger van Halteren	47161-00031USPX	3407

30223 7590 05/19/2004

JENKENS & GILCHRIST, P.C.
225 WEST WASHINGTON
SUITE 2600
CHICAGO, IL 60606

EXAMINER	
LE, HUYEN D	

ART UNIT	PAPER NUMBER
2643	13

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/980,430	VAN HALTEREN ET AL.	
	Examiner	Art Unit	
	HUYEN D. LE	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-36* is/are pending in the application.

4a) Of the above claim(s) *12-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-11 and 27-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *12-26* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

1. It appears that claims 8-11 and 27-36 are pending (see the Remarks filed 01/21/04). The withdrawn claims 12-26 should be canceled in the application.

Claim Rejections - 35 USC § 112

2. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 is dependent on the withdrawn claim 12.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8-11, 27 and 29-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Sone (U.S. patent 5,432,758).

Regarding claims 8 and 30, Sone teaches a coil assembly for an electroacoustic transducer which comprises a coil (20) and an electric circuit board (40, 42, 44, 48, 50, 52, figures 1, 2, 7, 8, 9). As shown in the drawings, at least a surface portion of the electric circuit board is positioned against the coil in a substantially perpendicular to the axis of the coil (20).

Regarding claim 9, as broadly claimed, the printed circuit board (40, 42, 44, 48, 50, 52) is flexible (col. 4, lines 27-43, col. 6, lines 11-19 and lines 65-67).

Regarding claim 10, Sone teaches the printed circuit board which is rigid (col. 4, lines 15-18 and lines 27-33 and col. 6, lines 8-10).

Regarding claim 11, Sone shows the electric circuit board which includes an opening (58) as claimed.

Regarding claim 27, Sone teaches the surface portion of the electric circuit board which is positioned against the coil by adhesion (col. 4, lines 57-61 and col. 6, lines 61-68 through col. 7, lines 1-5).

Regarding claim 29, Sone teaches the electric circuit board which includes electronics for signal processing (col. 4, lines 30-41).

Regarding claims 31 and 36, Sone teaches a coil assembly for an electroacoustic transducer which comprises a coil (20) and an electric circuit board (40, 42, 44, 48, 50, 52, figures 1, 2, 7, 8, 9). As shown in the drawings, at least a surface portion of the electric circuit board is positioned against the coil in a substantially perpendicular to the axis of the coil (20). Further, Sone teaches the electric circuit board which includes electronics for signal processing (col. 4, lines 30-41).

Regarding claim 32, as broadly claimed, the printed circuit board (40, 42, 44, 48, 50, 52) is flexible (col. 4, lines 27-43, col. 6, lines 11-19 and lines 65-67).

Regarding claim 33, Sone teaches the printed circuit board which is rigid (col. 4, lines 15-18 and lines 27-33 and col. 6, lines 8-10).

Regarding claim 34, Sone shows the electric circuit board which includes an opening (58) as claimed.

Regarding claim 35, Sone teaches the surface portion of the electric circuit board which is positioned against the coil by adhesion (col. 4, lines 57-61 and col. 6, lines 61-68 through col. 7, lines 1-5).

5. Claims 8-9 and 31-32 rejected under 35 U.S.C. 102(b) as being anticipated by Lee (U.S. patent 5,861,686).

Regarding claims 8 and 31, Lee teaches a coil assembly for an electroacoustic transducer which comprises a coil (8) and an electric circuit board (3b, figures 1, 2, 3). As shown in the drawings, at least a surface portion of the electric circuit board is positioned against the coil in a substantially perpendicular to the axis of the coil (8). The electric circuit board includes signal processing electronics (col. 3, lines 65-67).

Regarding claims 9 and 32, Lee teaches the electric circuit board (3b) is flexible (col. 3, lines 41-42 and lines 49-51).

6. Claim 8 is rejected under 35 U.S.C. 102(a) as being anticipated by Kuwabara et al. (U.S. patent 6,023,518).

Kuwabara teaches a coil assembly for an electroacoustic transducer which comprises a coil (22) and an electric circuit board (26, figures 1, 4, 5). As shown in the drawings, at least a surface portion of the electric circuit board is positioned against the coil in a substantially perpendicular to the axis of the coil (22).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-10, 29 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwabara (U.S. patent 6,023,518).

Regarding claims 9-10 and 33, Kuwabara teaches a printed circuit board (26). Kuwabara does not specifically teach that the circuit board (26) is flexible or rigid as claimed. However, the examiner takes the Office Notice that providing a printed circuit board in an electronic device made of flexible or rigid material is very well known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the circuit board (26) of Kuwabara which is made of flexible or rigid material for an alternate choice.

Regarding claims 29 and 31, Kuwabara teaches a printed circuit board (26). Kuwabara does not specifically teach that the circuit board (26) includes signal processing electronics as claimed. However, the examiner takes the Office Notice that providing a printed circuit board in an electronic device included the electronic components for signal processing is very well known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the circuit board (26) of the Kuwabara sound generator which includes the electronic components for processing the signals.

Response to Arguments

8. Applicant's arguments with respect to claims 8-11 and 27-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoo et al. (U.S. patent 6,389,148) teaches a coil which is mounted on a terminal plate.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (703)305-4844. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HL
May 14, 2004

HUYEN LE
PRIMARY EXAMINER

MAIL STOP AF
RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2643

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	: 09/980,430	Confirmation Number	: 3407
Applicant	: Aart Zeger van Halteren		
Filed	: March 29, 2002		
TC/A.U.	: 2643		
Examiner	: Huyen D. Le		
Docket Number	: 47161-00031USPX		
Customer Number	: 30,223		

AMENDMENT AND REPLY TO FINAL OFFICE ACTION DATED MAY 19, 2004

EV284715897US

Express M
I hereby certify that this paper or fee is being deposited with the United States Postal Service EXPRESS MAIL POST OFFICE TO ADDRESSEE service under 37 C.F.R. 1.10 on the date indicated above and is addressed to: Mail Stop After Final, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

7/19/2004
Date

Adrienne White

Mail Stop After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This paper is in response to the Final Office Action dated May 19, 2004. The shortened statutory period for response is three months from the mailing date, i.e., by August 19, 2004, and this paper is being submitted prior to that date and within two months of the mailing of the Final Office Action. Please enter the following amendments and remarks into the record for this application.

A **Listing of Claims** begins on page 2 of this paper.

Remarks/Arguments begin on page 4 of this paper.

Listing Of Claims:

This listing of claims will replace all prior versions and listings of claims.

1-7. (Canceled)

8. (Previously Presented) A coil assembly for an electroacoustic transducer, comprising:

a coil having a coil opening defining an axis therethrough; and

an electric circuit board wherein at least a surface portion thereof is positioned against said coil in a substantially perpendicular relationship to said axis.

9. (Previously Presented) The coil assembly of claim 8, wherein said electric circuit board is flexible.

10. (Previously Presented) The coil assembly of claim 8, wherein said electric circuit board is rigid.

11. (Previously Presented) The coil assembly of claim 8, wherein said electric circuit board includes an opening, said opening of said electric circuit board being substantially aligned with said coil opening.

12-26. (Canceled)

27. (Previously Presented) The coil assembly of claim 8, wherein said surface portion of said electric circuit board is positioned against said coil by adhesion.

28. (Currently Amended) The coil assembly of claim [[12]] 27, wherein said adhesion is glue.

29. (Previously Presented) The coil assembly of claim 8, wherein said electric circuit board includes electronics for signal processing.

30. (Previously Presented) The coil assembly of claim 8, wherein said electric circuit board is electrically connected to said coil via lead wires.

31. (Previously Presented) A coil assembly for an electroacoustic transducer, comprising:

a coil having a coil opening defining an axis therethrough; and

an electric circuit board wherein at least a surface portion thereof is positioned against said coil in a substantially perpendicular relationship to said axis, said electric circuit board including signal processing electronics.

32. (Previously Presented) The coil assembly of claim 31, wherein said electric circuit board is flexible.

33. (Previously Presented) The coil assembly of claim 31, wherein said electric circuit board is rigid.

34. (Previously Presented) The coil assembly of claim 31, wherein said electric circuit board includes an opening, said opening of said electric circuit board being substantially aligned with said coil opening.

35. (Previously Presented) The coil assembly of claim 31, wherein said surface portion of said electric circuit board is positioned against said coil by adhesion.

36. (Previously Presented) The coil assembly of claim 31, wherein said electric circuit board is electrically connected to said coil via coil lead wires.

REMARKS/ARGUMENTS

Please cancel claims 12-26. Claims 8-11, and 27-36 remain in the application for further prosecution. Claim(s) 28 has been amended. Claims 1-7 and 12-26 have been canceled.

I. Claim Rejection – 35 U.S.C. § 112

Claim 28 was rejected under 35 U.S.C. § 112 as being dependent on withdrawn Claim 12. Claim 28 has been amended to depend from Claim 27, thereby overcoming the rejection. Applicants thank the Examiner for the careful examination of the claims.

II. Claim Rejection – 35 U.S.C. § 102

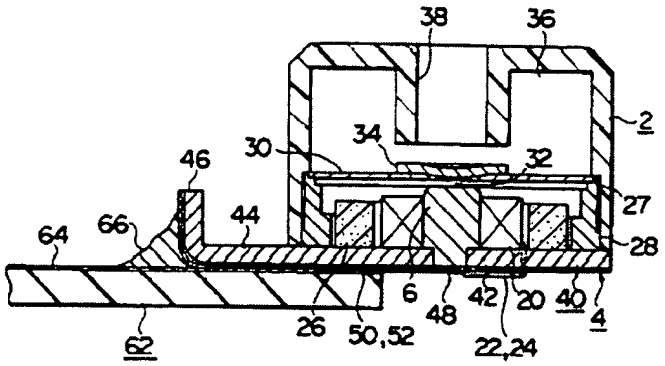
A. Sone Does Not Teach or Suggest The Claimed Electric Circuit Board

Claims 8-11, 27, and 29-36 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,432,758 (Sone), a prior art reference not cited in any previous Office Action. The Office Action contends that "Sone teaches a coil assembly for an electroacoustic transducer which comprises a coil (20) and an electric circuit board (40, 42, 44, 48, 50, 52, figures 1, 2, 7, 8, 9)." Office Action at 2, ¶ 4. Applicants respectfully submit that the elements 40, 42, 44, 48, 50, and 52 do **not** form an electric circuit board, but rather, form a "magnetic circuit" as explicitly disclosed by Sone. Furthermore, Sone explicitly discloses that element 62 is a "printed board," and clearly *no portion* of the printed board 62 (*see* FIG. 5 of Sone) is positioned against a coil in a substantially perpendicular relationship to its axis as called for by independent claims 8 and 31.

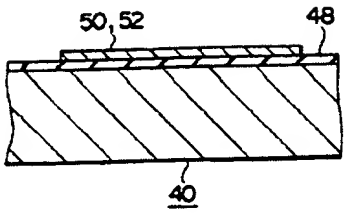
Sone *repeatedly* teaches that the metal base plate 40 forms a closed **magnetic circuit** not an electric circuit as called for by claims 8 and 31: "The metal base plate 40 is formed of a single metallic plate made of a magnetic material to constitute a part of a **magnetic circuit**." Col. 4, ll. 13-16. "That is, both the core 6 and the metal base plate 40 form a **closed magnetic circuit** to thereby constitute a part of a **magnetic path** of the magnetic driving portion 5." Col. 5, ll. 25-28. "The electroacoustic transducer has a diaphragm 30 which constitutes a **closed magnetic circuit** together with the magnet 26 and is driven by the vibrating magnetic field . . . ." Col. 5, ll. 40-43. "FIG. 4 shows a concrete embodiment of the metal base plate 40 which serves as a closing means for the opening of the housing 2 and also constitutes a part of the **closed**

magnetic circuit." Col. 6, ll. 5-8. "The core 6 is not mechanically connected to the base portion but integrated with the metal base plate 40 to form a **closed magnetic circuit** so as to constitute a part of the magnetic path of the magnetic driving portion 5." Col. 8, ll. 24-28. Nowhere does Sone teach or suggest that the metal base plate 40 is part of an electric circuit board, nor could it be since it is made of metal. Col. 6, ll. 8-10 ("Accordingly, the metal base plate 40 is made of a metallic plate so as to give a suitable rigidity thereto."). No electric circuit board could have a metal base plate because metal is conductive.

Sone does disclose a printed board 62, shown in FIG. 5 (reproduced below) and ignored by the Office Action, but clearly no portion of the printed board 62, assuming *arguendo* that it is an electric circuit board, is positioned against the core 20.



Rather, the printed board 62 is positioned against the metal base plate 40 as shown above and as described in Sone: "The closing portion 42 and the terminal portion 44 may be electrically connected and mechanically fixed by solder 66 to a conductive pattern 64 of a printed board 62, as illustrated in FIG. 5." Col. 6, ll. 24-27. *See also* col. 7, ll. 33-36 ("Compared with the embodiment as illustrated in FIG. 5, fixing strength **between** the metal base plate 40 and the printed board 62 is increased, thereby enhancing the reliability thereof."). In fact, as is illustrated in FIG. 4 (oriented upside-down relative to FIG. 5 and reproduced below), the conductive patterns 50, 52 are disposed on the underside of the metal base plate 40 separated by an insulating film 48:



Thus, Sone teaches that the "conductive patterns 50 and 52 are formed by a conductor forming methods [sic] such as printing or plating conductive paste, and may be used for mounting circuits or elements of the electroacoustic transducer for miniaturization and simplification of electronic devices." Col. 4, ll. 36-41. Although the Examiner cites this passage as alleged support for a teaching of electronics for signal processing (see claim 29), Applicants respectfully disagree. Because the conductive patterns 50, 52 are located on the underside of the metal base plate 40, they are used for mounting circuits or transducer elements to the printed board 62 and not to the metal base plate 40. As explained above, if the circuits or electric transducer elements were mounted to the metal base plate 40, they would not function because the plate is made of metal.

Therefore, for at least the foregoing reasons, claims 8 and 31 are believed to be allowable over Sone, and the Examiner is requested to issue a Notice of Allowance. Regarding the dependent claims 9-10, 27-30, 32-36, they are believed to be allowable for at least the reason that the respective claims from which they depend are allowable.

Regarding claims 9 and 32, they are believed to be allowable over Sone for at least the additional reason that Sone does not teach or suggest a **flexible** electric circuit board as claimed. The Office Action cites Col. 4, ll. 27-43, and Col. 6, ll. 11-19 & 65-67 as alleged support that the metal base plate 40 can be flexible. In fact, these passages nowhere state that the metal base plate 40 can be flexible. On the contrary, Sone teaches that "the metal base plate 40 is made of a metallic plate so as to give a suitable **rigidity** thereto." Col. 6, ll. 8-10. That the conductive patterns 50, 52 may be flexible is of no moment because the Office Action identifies the electric circuit board as including the metal base plate 40, which is clearly **rigid** not flexible. Accordingly, claims 9 and 32 are believed to be allowable over Sone for at least this additional reason.

Regarding claims 11 and 34, they are believed to be allowable over Sone for at least the additional reason that the metal base plate 40 is not the electric circuit board as claimed, and

therefore lacks the opening as claimed. Moreover, Sone does not teach or suggest that the printed board 62 includes any opening, let alone an opening that is substantially aligned with the coil opening. Accordingly, claims 11 and 34 are believed to be allowable over Sone for at least this additional reason.

Claim 29 is believed to be allowable for at least the reason discussed above in connection with claims 8 and 31.

Regarding claim 36, even assuming *arguendo* the printed board 62 is an electric circuit board, Sone does not teach electrically connecting the printed board 62 to the coil via coil lead wires. Sone actually teaches that the metal base plate 40 may be electrically connected and mechanically fixed by "**solder** 66 to a conductive pattern of a printed board 62, as illustrated in FIG. 5." Col. 6, ll. 25-27.

B. Lee Does Not Even Show A Circuit Board

Claims 8-9 and 31-32 were also rejected as being allegedly anticipated by U.S. Patent No. 5,861,686 (Lee), another reference not cited in any previous Office Action. The Office Action identifies the claimed electric circuit board as allegedly corresponding to element 3b of Lee, but overlooks the fact that Lee explicitly states that a printed circuit board (PCB) is not shown in the Figures. The second vibration member 3b is clearly not an electric circuit board as claimed. It is "not made of a thin metal plate bus is made of a synthetic resin film." Col. 4, ll. 7-9. Lee describes the purpose of the second vibration member 3b as follows:

> During a process of producing a cellular or pager phone, the integrated device of this invention is set in the phone using the tapes 30. In addition, the outer terminals 33b of the lead panel 23b of the second vibration member 3b are connected to the **PCB (not shown)** of the phone, Due to such a second vibration member 3b, the integrated device of this invention effectively connects the coil 8 to the PCB of the phone while being free from any separate circuit board.
>
> In the operation of the above device, a user freely select, one of the two modes: a vibration mode performed by the first vibration member 3a and a sound mode performed by the second vibration member 3b. When a user selects one of the two modes, the PCB of the cellular or pager phone outputs a high or low frequency to the coil 8 of the device in response to a calling signal output from a microprocessor of the phone. In this case, the output frequency is automatically controlled by the PCB in accordance with a selected mode of the device.

> Due to such a frequency applied from the PCB to the coil 8 of the device, an electromagnetic field is formed between the magnet 7 and the coil 8, thus moving both the yoke 6 and the coil 8 in the axial direction of the case 1 **while selectively vibrating either of the two vibration members 3a and 3b**.

Col. 5, ll. 13-28. Thus, the second vibration member 3b vibrates in response to a frequency applied by a printed circuit board *which is not even shown in Lee.* Accordingly, Lee does not even show an electric circuit board, let alone one as claimed in claims 8-9, 31-32. Therefore, they are believed to be allowable over Lee.

C. The "Coil Spring" Of Kuwabara Does Not Correspond to The Claimed Coil

Claim 8 was rejected under 35 U.S.C. § 102(a) as being allegedly anticipated by U.S. Patent No. 6,023,518 (Kuwabara), yet another reference not cited in any previous Office Action. The Office Action avoids any mention of the "coil 17" shown and described repeatedly throughout Kuwabara, but instead contends that the **coil spring** 22 (the Office Action refers to the coil spring 22 as a coil) corresponds to the claimed coil. This contention runs directly afoul of the explicit teachings of Kuwabara.

Kuwabara itself makes a clear distinction throughout the written description between the "coil 17" and the "coil spring 22." Col. 2, ll. 51-52 ("Thus, the coil 17 is connected to the coil springs 22."). Kuwabara also makes the same distinction in the claims (*see, e.g.*, Claim 1, "a coil" and "at least two coil springs"). If the coil spring 22 is a coil as the Office Action contends, then the distinction by Kuwabara between the coil spring 22 and the coil 17 is meaningless. Thus, Applicants respectfully submit that claim 8 is allowable of Kuwabara.

III. Claim Rejection – 35 U.S.C. § 103

Claims 9-10, 29, and 31-33 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kuwabara. Regarding claims 9-10 and 29, they are believed to be allowable for at least the reason that claim 8, from which they depend, is allowable. Regarding independent claim 31, it is believed to be allowable for at least the same reasons that claim 8 is allowable over Kuwabara. Regarding claims 32-33, they are believed to be allowable for at least the reason that claim 31 is allowable.

Conclusion

It is the Applicants' belief that all of the claims are now in condition for allowance and action towards that effect is respectfully requested.

If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at the number indicated.

No fees are believed to be due with this paper, however, the Commissioner is authorized to charge any additional fees which may be required (except the issue fee) to JENKENS & GILCHRIST, P.C., Deposit Account No. 10-0447 (47161-00031USPX).

Respectfully submitted,

Date: July 19, 2004

Justin D. Swindells
Reg. No. 48,733
JENKENS & GILCHRIST, P.C.
225 West Washington Street, Suite 2600
Chicago, Illinois 60606-3418
(312) 425-3900

Attorney for Applicants

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,430	03/29/2002	Aart Zeger van Halteren	47161-00031USPX	3407

30223 7590 09/02/2004

JENKENS & GILCHRIST, P.C.
225 WEST WASHINGTON
SUITE 2600
CHICAGO, IL 60606

EXAMINER	
LE, HUYEN D	

ART UNIT	PAPER NUMBER
2643	

SEP 09 2004

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED
INIT. PB DATE: 9/9/04
ACTION: Advisory Action DATE: [redacted] 9/19/04 — w/no Ext
Due
Deadline — 11/19/04

Advisory Action	Application No.	Applicant(s)	
	09/980,430	VAN HALTEREN ET AL.	
	Examiner	Art Unit	
	HUYEN D. LE	2643	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 July 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See Continuation Sheet*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☒ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *8-11 and 27-36*.

   Claim(s) withdrawn from consideration: *12-26*.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

HUYEN LE
PRIMARY EXAMINER

Continuation of 5. does NOT place the application in condition for allowance because: The arguments filed on 07/19/04 do not overcome the Final Office Action mailed on 05/19/04.

HUYEN LE
PRIMARY EXAMINER